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(11)

EP 1 629 873 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
01.03.2006 Bulletin 2006/09

(51) Int Cl.:
A63H 37/00 ^(2006.01)

(21) Application number: **05255259.3**

(22) Date of filing: **26.08.2005**

(84) Designated Contracting States:
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI
SK TR**
Designated Extension States:
AL BA HR MK YU

(30) Priority: **27.08.2004 GB 0419261**

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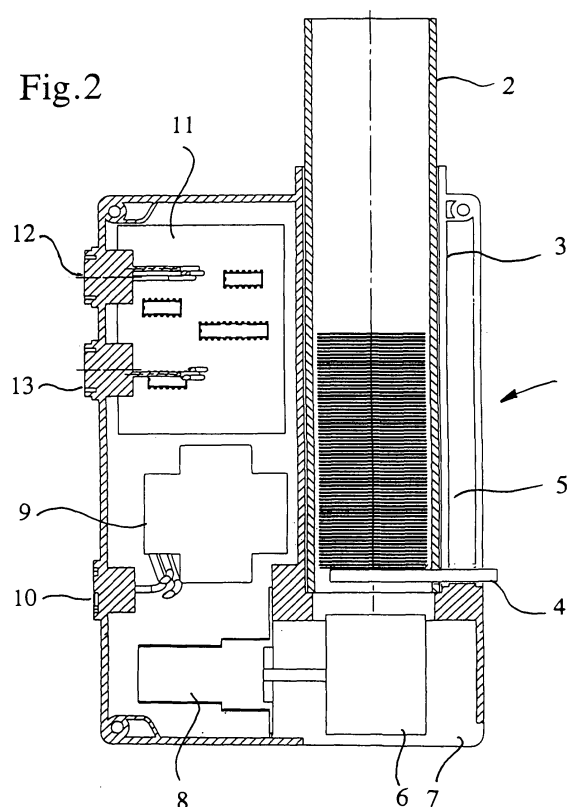
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(54) **Confetti discharge methods and machines**

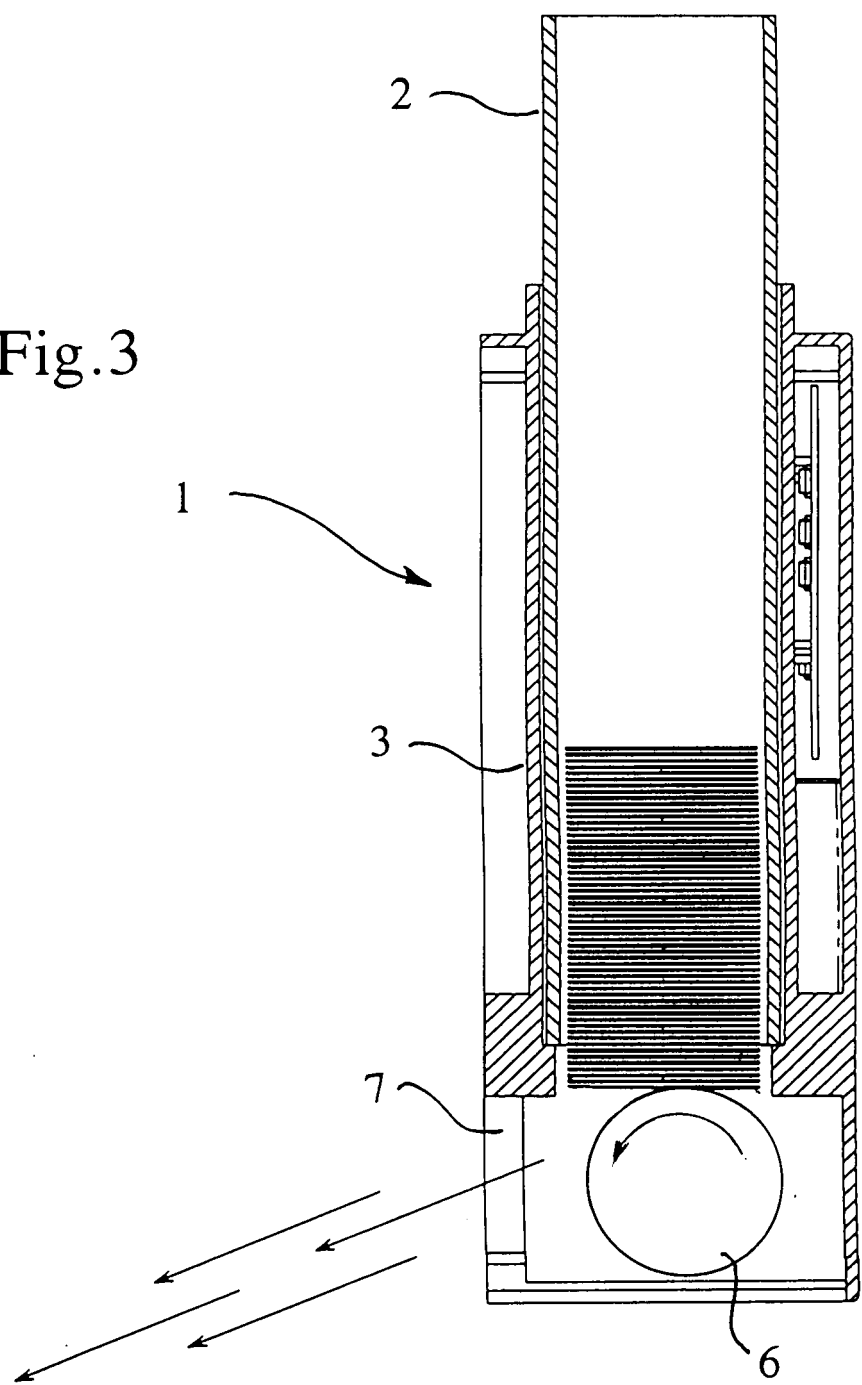
(57) Confetti is discharged by machine from a stack by engagement of a rotating drum (6) with the bottom of the stack. The stack is retained within a tubular cassette (2) by a pin (4) which obstructs the open bottom of the cassette (2) and which is removed to release the stack onto the drum (6) once the cassette (2) is entered into the machine (1). The rate of discharge of confetti from the stack through a mouth (7) of the machine (1) is regulated by control of the speed of an electric motor (8) that drives the drum (6). The drum (6) may have a rubber or grit surface (14) and may have a projecting blade (15) for removal of the packaging of billets or wads of confetti that are fed onto the drum (6).

Fig.2



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Fig.3



Description

[0001] This invention relates to confetti discharge methods and machines.

[0002] The discharge of confetti is used for artistic and other effects in theatre productions and in other entertainment and festive events and for celebration purposes. The confetti is commonly in the form of circular discs of paper, but may be of rectangular-strip or other configuration, and may be of metal or plastics foil.

[0003] Various methods and machines are used to effect the discharge of the confetti, but they generally fall short of providing a fully-controlled discharge. It is an object of the present invention to provide an improved method and machine in this regard.

[0004] According to one aspect of the present invention there is provided a method for discharge of confetti wherein discharge takes place from a stack of the confetti by engagement of a rotating member with the confetti at the bottom of the stack.

[0005] According to another aspect of the invention a machine for discharge of confetti comprises means for holding a stack of confetti, a rotatable member for engaging the confetti at the bottom of the stack, and means for rotating the rotatable member to discharge the confetti piece by piece from the bottom of the stack.

[0006] The rotating rotatable-member of the method and machine of the invention may have a rubber or grit surface for engagement with the bottom of the stack. Alternatively, or in addition, the surface may be grooved, or may have radially-projecting teeth, for engaging the bottom of the stack to effect discharge of the confetti.

[0007] The rotatable member may be a rotatably-mounted drum, but may be a wheel or endless belt, and the rate of discharge of the confetti may be regulated simply by control of the rate of rotation of this member.

[0008] Loading of the stack of confetti may be carried out using a tubular cassette that is open at both ends but has a removable pin or other retaining member that projects across the bottom of the cassette for retention of the confetti in the stack. The pin or other retaining member may be removed when the stack is established ready for engagement with the rotatable member.

[0009] When the confetti is packaged in billets or wads (as normally the case where rectangular strips of material, such as sold under the registered trade mark FLUTTER FETTI, are involved), the billets or wads may be fed directly onto the rotatable member. Rotation of the rotatable member in this case may be effective, for example, by means of one or more blades or other projections on it, to split open the packaging and thereby release the contained confetti for discharge piece by piece under the action of the rotating member.

[0010] A method and machine for discharge of confetti, all in accordance with the present invention, will now be described, by way of example, with reference to the accompanying drawings, in which:

Figure 1 is a front perspective view of the confetti-discharge machine according to the invention, during loading with a stack of confetti;

Figure 2 is a front elevation, partly broken away, of the confetti-discharge machine of Figure 1;

Figure 3 is a side elevation, partly broken away, of the confetti-discharge machine of Figures 1 and 2, in operation; and

Figures 4 and 5 are illustrative, respectively, of alternative forms of drum for use in the confetti-discharge machine of Figures 1 to 3.

[0011] Referring to Figures 1 to 3, a column of confetti is loaded into the confetti-discharge machine 1 using a tubular cassette 2 inserted into a receiving tube 3 of the machine 1. The cassette 2 is open at both ends and a pin 4 extends across its bottom end so as to retain the confetti as a stack within the cassette 2, as illustrated in Figures 1 and 2. When the cassette 2 is pushed down to the bottom of the tube 3 as illustrated in Figure 2, the pin 4 runs down a longitudinal slot 5 in a side-wall of the machine 1 and is then withdrawn by hand to prepare the machine 1 for operation.

[0012] Withdrawal of the pin 4 releases the stack onto a rotatably-mounted drum 6 immediately under the tube 3 at the base of the machine 1. Rotation of the drum 6 as indicated in Figure 3, peels off the confetti from the bottom of the stack piece by piece for discharge through a mouth 7 of the machine 1 at a rate dependent on the rate of rotation of the drum 6.

[0013] As shown in Figure 2, the machine 1 includes an electric motor 8 for driving the drum 6, that is powered via a transformer 9 from a power-input socket 10. The speed with which the motor 8 drives the drum 6 is regulated from a control board 11 which controls energisation of the motor 8 from the transformer 9. The board 11, which has input and output connectors 12 and 13 respectively, may be connected via the connectors 12 and 13 into a DMX (digital multiplex) lighting-control system of a theatre for remote control of the drive motor 8 and its speed. The speed of rotation of the drum 6 can be very precisely controlled as required, between the extremes of very slow, to give a gentle discharge, and very high, to give a furious discharge.

[0014] Where packaged billets or wads of confetti are to be used, they can be loaded individually by hand one upon the other directly into a receiving tube (not shown) corresponding to the tube 3. The receiving tube in this case may have a longitudinal slot that is wide enough to facilitate loading using the fingers.

[0015] The drum 6 of the machine 1 may, as illustrated in Figure 4, have a rubber or grit surface 14 for engagement with the bottom of the stack in peeling off the confetti piece by piece. As alternatives, the surface may be grooved leaving projecting ridges or lands to peel off the

pieces from the bottom of the stack, and may have projecting teeth. However, and as illustrated in Figure 5, the drum 6 may have a blade 15 that projects from it in a quasi-tangential manner for peeling off the pieces one by one and cutting or ripping through any packaging of the confetti where billets or wads are loaded as described above.

[0016] A rotating wheel or endless belt may be used in place of the rotating drum 6.

Claims

1. A method for discharge of confetti wherein discharge takes place from a stack of the confetti by engagement of a rotating member with the confetti at the bottom of the stack. 15
2. A method according to Claim 1 wherein the rate of rotation of the rotating member is controlled for regulating the rate of discharge of the confetti from the bottom of the stack. 20
3. A method according to Claim 1 or Claim 2 wherein the rotating member is driven in rotation by an electric motor. 25
4. A method according to any one of Claims 1 to 3 wherein the rotating member has a rubber or grit surface for frictionally engaging the confetti at the bottom of the stack to effect its discharge. 30
5. A method according to any one of Claims 1 to 4 wherein the rotating member is a rotating drum. 35
6. A method according to any one of Claims 1 to 5 wherein the rotating member carries a projecting blade for removal of packaging from the stack. 40
7. A method according to any one of Claims 1 to 6 wherein the stack of confetti is contained within a tubular cassette, and wherein the rotating member engages the bottom of the stack beneath the cassette. 45
8. A machine for discharge of confetti, comprising means for holding a stack of confetti, a rotatable member for engaging the confetti at the bottom of the stack, and means for rotating the rotatable member to discharge the confetti piece by piece from the bottom of the stack. 50
9. A machine according to Claim 8 including means for controlling the rate of rotation of the rotatable member so as to regulate the rate of discharge of the confetti from the bottom of the stack. 55
10. A machine according to Claim 8 or Claim 9 wherein

the means for rotating the rotatable member is an electric motor.

11. A machine according to any one of Claims 8 to 10 wherein the rotatable member has a rubber or grit surface for frictionally engaging the confetti at the bottom of the stack to effect its discharge.
12. A machine according to any one of Claims 8 to 11 wherein the rotatable member is a rotatably-mounted drum.
13. A machine according to any one of Claims 8 to 12 wherein the rotatable member carries a projecting blade for removal of packaging from the stack.
14. A machine according to any one of Claims 8 to 13 wherein the means for holding the stack of confetti is a tubular cassette, and wherein the rotatable member engages the bottom of the stack beneath the cassette.

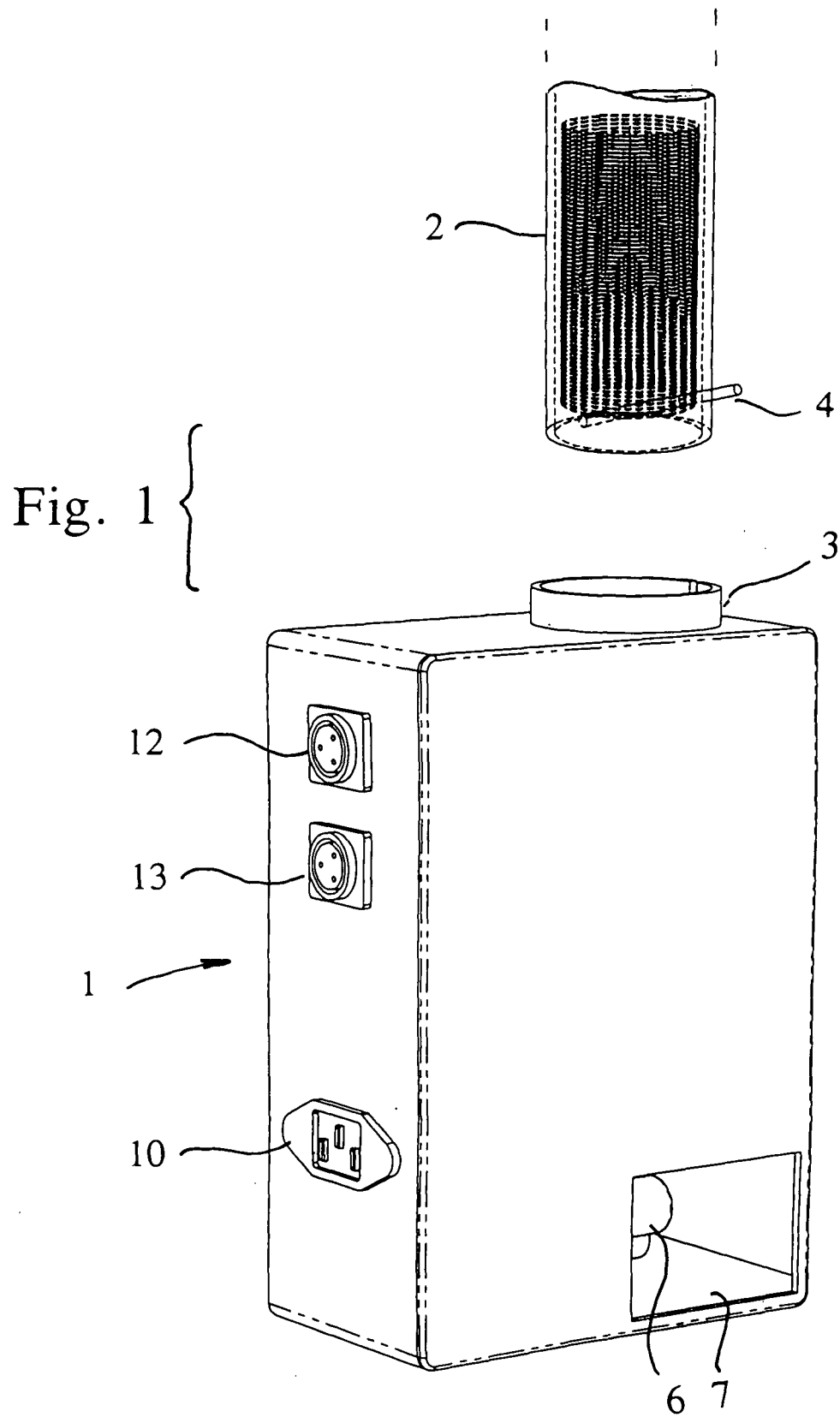


Fig.2

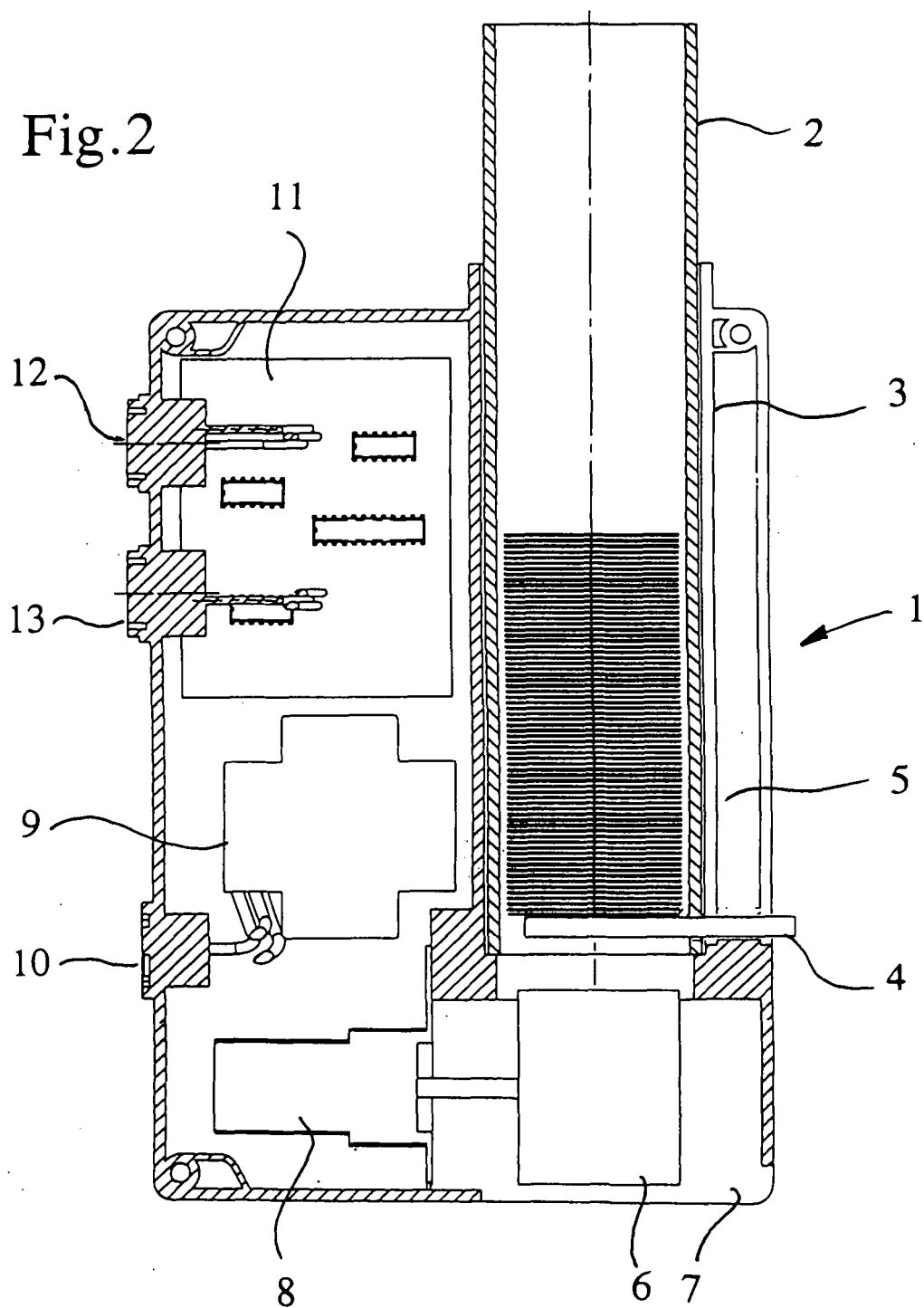


Fig.3

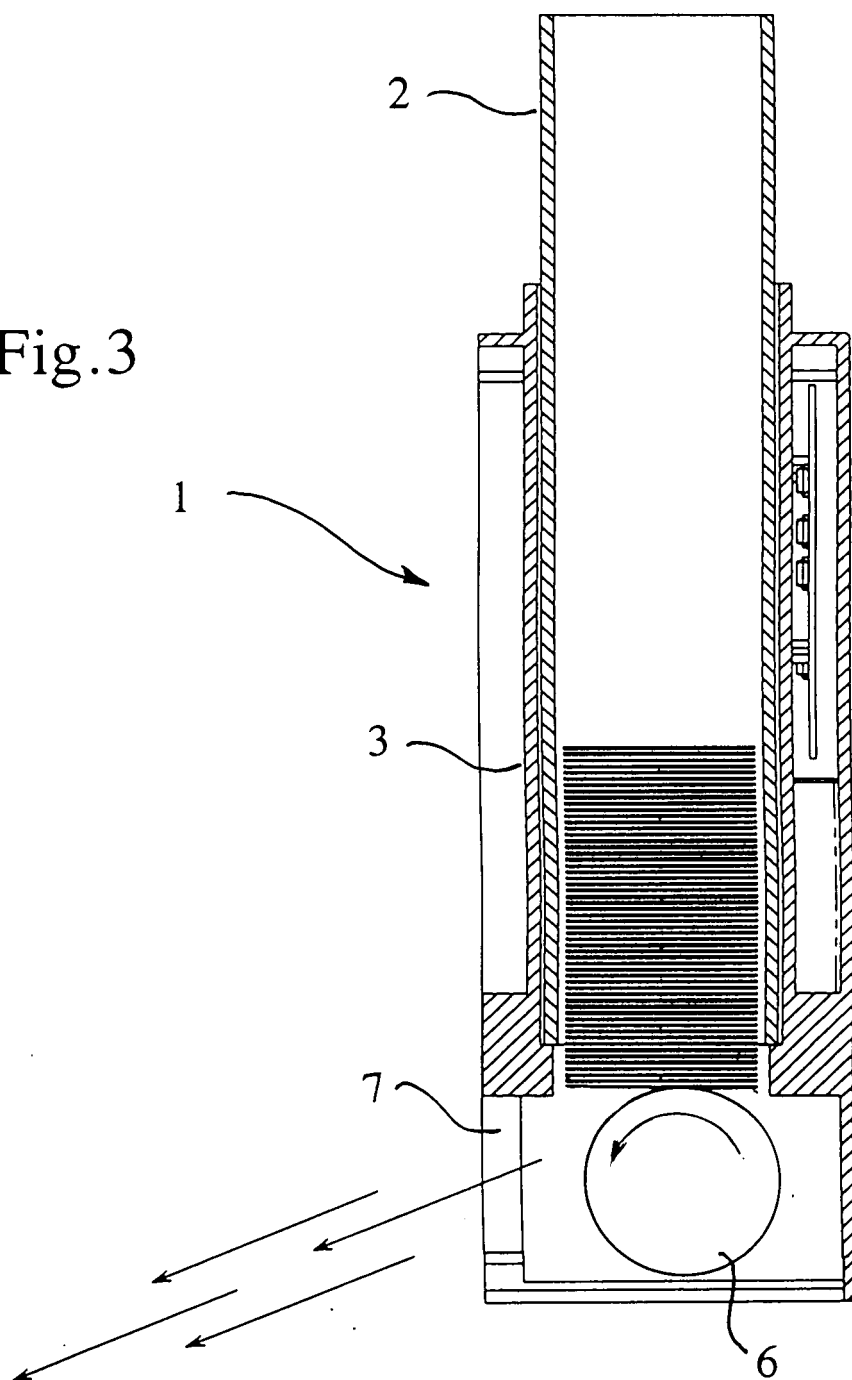


Fig.4

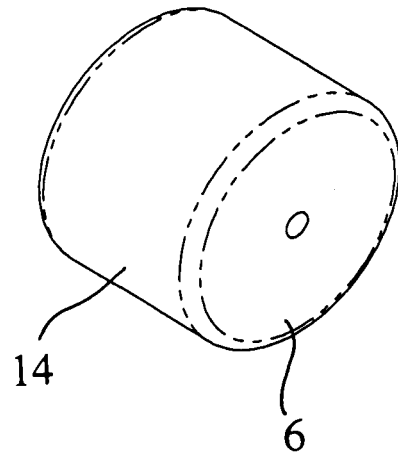
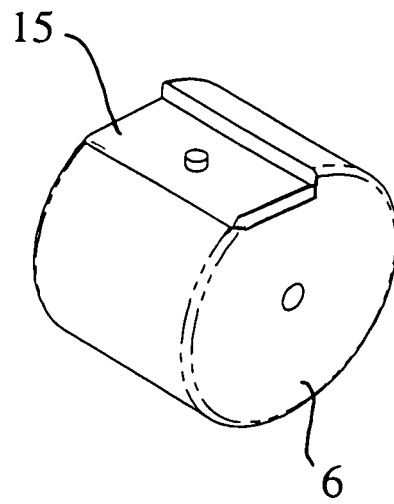


Fig.5





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EUROPEAN SEARCH REPORT

Application Number
EP 05 25 5259

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			TECHNICAL FIELDS SEARCHED (IPC)
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The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 21 December 2005	Examiner Brumme, I
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 05 25 5259

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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21-12-2005

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